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09/981,644	10/16/2001	Jason Lango	5693P113	7020

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NETWORK APPLIANCE/BLAKELY
1279 OAKMEAD PARKWAY
SUNNYVALE, CA 94085-4040

EXAMINER	
AILES, BENJAMIN A	
ART UNIT	**PAPER NUMBER**
2142	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/981,644	LANGO ET AL.	
	Examiner	Art Unit	
	Benjamin A. Ailes	2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 November 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *79-96* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *79-96* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/21/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to correspondence filed 21 November 2007.

2. Claims 79-96 remain pending.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 90-96 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Regarding claim 90, the phrase "after the streaming media data" in line 10 of the claim is deemed unclear because the claim limitation is deemed grammatically incorrect. The claim does not specifically define what is actually occurring "after the streaming media data." Dependent claims 91-96 are rejected based on their dependency of independent claim 90.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 79-96 are rejected under 35 U.S.C. 103(a) as being unpatentable over Markowitz et al. (US 6,651103 B1), hereinafter referred to as Markowitz, in view of Pinckney, III et al. (US 2002/0169926 A1), hereinafter referred to as Pinckney.

9. Regarding claim 79, Markowitz teaches a network caching system to cache streaming media, comprising:

a processor (col. 2, ll. 61-65; gateway device);

a non-volatile mass storage facility coupled to the processor, to cache streaming media data (col. 4, ll. 20-21; media storage device);

a memory storing program code, for execution by the processor, the code implementing:

an operating system (col. 2, ll. 61-65; inherent to operation);

a protocol dependent caching subsystem (col. 4, ll. 20-21; media storage device), which includes a plurality of streaming media encoders to support a plurality of streaming media protocols (col. 4, ll. 10-18; retrieve and store a plurality of different versions), wherein the protocol dependent caching subsystem is configured to interact with an upstream server (col. 4, ll. 20-23; retrieve data from a media server), including

to obtain from the upstream server streaming media data encoded according to a particular streaming media protocol (col. 4, ll. 12-15; request certain versions), to decode the streaming media data for storage in the mass storage facility (col. 4, ll. 2-5; encode on the fly), and subsequently to encode the streaming media data into a first streaming protocol used by a client system after the streaming media data is retrieved from the mass storage facility for delivery to the client system (col. 6, ll. 32-40; retrieve and stream to client).

Markowitz teaches the utilization of a protocol dependent caching subsystem but does not explicitly teach the utilization of a protocol independent caching subsystem wherein the independent subsystem is utilized to manage a flow of streaming media data to and from the operating system in a streaming media protocol independent manner. However, in related art, Pinckney teaches on this aspect of a protocol independent cache wherein Pinckney teaches the utilization of a cache wherein the data stored in the cache memory is not dependent on a certain protocol and is therefore considered protocol independent content (p. 3, para. 0033 and p. 7, para. 0069). One of ordinary skill in the art at the time of the applicant's invention would have found it obvious in view of Pinckney to utilize a protocol independent caching subsystem in combination with the protocol dependent cache taught by Markowitz. One of ordinary skill in the art would have been motivated to utilize a protocol independent cache as taught by Pinckney to separate the content being sought by a user from the protocol needed in order to fetch the content (Pinckney, p. 7, para. 0069). The combination of Markowitz and Pinckney teaches further the delivery of streaming media data to the

client system according to the first streaming media protocol and to control a pace of delivery of the streaming media data to the client (Markowitz, col. 6, ll. 4-17; stream from media storage to client based on different bandwidth capabilities).

10. Regarding claim 80, Markowitz and Pinckney teach a network caching system wherein the protocol independent caching subsystem comprises:

a disk subsystem to control storage of streaming media data in the mass storage facility and retrieval of streaming media data from the mass storage facility (Markowitz col. 6, ll. 41-46; use of media storage devices); and

a pacer subsystem to control delivery of streaming media data to the client system (Markowitz, col. 6, ll. 4-16; control of stream).

11. Regarding claim 81, Markowitz and Pinckney teach a network caching system wherein the streaming media data are read from the mass storage facility asynchronously with respect to outputting the streaming media data to the client system (Pinckney, p. 3, para. 0033).

12. Regarding claim 82, Markowitz and Pinckney teach a network caching system wherein the streaming media data are read from the mass storage facility at a pace independent of a requested pace for streaming the streaming media data (Markowitz, col. 6, ll. 4-16; control of stream).

13. Regarding claim 83, Markowitz and Pinckney teach a network caching system wherein the streaming media data are read from the mass storage facility as one or more data objects that include payload packets comprising media data formatted in

accordance with a streaming media format supported by the client system (Pinckney, p. 3, para. 0033).

14. Regarding claim 84, Markowitz and Pinckney teach a network caching system wherein the streaming media data is stored in the mass storage facility as a plurality of discrete data objects, each of said data objects containing a separate portion of a media stream in the form of a plurality of media packets formatted for a particular streaming media protocol (Pinckney, p. 3, para. 0033).

15. Regarding claim 85, Markowitz and Pinckney teach a network caching system wherein each of said plurality of discrete data objects is a file (Pinckney, p. 3, para. 0033).

16. Regarding claim 86, Markowitz teaches a network caching system to cache streaming media, comprising:

a processor (col. 2, ll. 61-65; gateway device);

a non-volatile mass storage facility coupled to the processor, to cache streaming media data (col. 4, ll. 20-21; media storage device);

a memory storing program code, for execution by the processor, the code implementing:

an operating system (col. 2, ll. 61-65; inherent to operation);

a protocol dependent caching subsystem (col. 4, ll. 20-21; media storage device), which includes a plurality of streaming media encoders to support a plurality of streaming media protocols (col. 4, ll. 10-18; retrieve and store a plurality of different versions), wherein the protocol dependent caching subsystem is configured to interact

with an upstream server (col. 4, ll. 20-23; retrieve data from a media server), including to obtain from the upstream server streaming media data encoded according to a particular streaming media protocol (col. 4, ll. 12-15; request certain versions), to decode the streaming media data for storage in the mass storage facility (col. 4, ll. 2-5; encode on the fly), and subsequently to encode the streaming media data into a first streaming protocol used by a client system after the streaming media data is retrieved from the mass storage facility for delivery to the client system (col. 6, ll. 32-40; retrieve and stream to client).

Markowitz teaches the utilization of a protocol dependent caching subsystem but does not explicitly teach the utilization of a protocol independent caching subsystem wherein the independent subsystem is utilized to manage a flow of streaming media data to and from the operating system in a streaming media protocol independent manner. However, in related art, Pinckney teaches on this aspect of a protocol independent cache wherein Pinckney teaches the utilization of a cache wherein the data stored in the cache memory is not dependent on a certain protocol and is therefore considered protocol independent content (p. 3, para. 0033 and p. 7, para. 0069). One of ordinary skill in the art at the time of the applicant's invention would have found it obvious in view of Pinckney to utilize a protocol independent caching subsystem in combination with the protocol dependent cache taught by Markowitz. One of ordinary skill in the art would have been motivated to utilize a protocol independent cache as taught by Pinckney to separate the content being sought by a user from the protocol needed in order to fetch the content (Pinckney, p. 7, para. 0069). The combination of

Markowitz and Pinckney teaches further the delivery of streaming media data to the client system according to the first streaming media protocol and to control a pace of delivery of the streaming media data to the client (Markowitz, col. 6, ll. 4-17; stream from media storage to client based on different bandwidth capabilities).

17. Regarding claim 87, Markowitz and Pinckney teach a network caching system wherein the protocol independent caching subsystem comprises:

a disk subsystem to control storage of streaming media data in the mass storage facility and retrieval of streaming media data from the mass storage facility (Markowitz col. 6, ll. 41-46; use of media storage devices); and

a pacer subsystem to control delivery of streaming media data to the client system (Markowitz, col. 6, ll. 4-16; control of stream).

18. Regarding claim 88, Markowitz and Pinckney teach a network caching system wherein the streaming media data are read from the mass storage facility asynchronously with respect to outputting the streaming media data to the client system (Pinckney, p. 3, para. 0033).

Regarding claim 89, Markowitz and Pinckney teach a network caching system wherein the streaming media data are read from the mass storage facility as one or more data objects that include payload packets comprising media data formatted in accordance with a streaming media format supported by the client system (Pinckney, p. 3, para. 0033).

19. Regarding claim 90, Markowitz teaches a method of operating a streaming media cache on a network comprising:

a protocol dependent caching subsystem (col. 4, ll. 20-21; media storage device), which includes a plurality of streaming media encoders to support a plurality of streaming media protocols (col. 4, ll. 10-18; retrieve and store a plurality of different versions), wherein the protocol dependent caching subsystem is configured to interact with an upstream server (col. 4, ll. 20-23; retrieve data from a media server), including to obtain from the upstream server streaming media data encoded according to a particular streaming media protocol (col. 4, ll. 12-15; request certain versions), to decode the streaming media data for storage in the mass storage facility (col. 4, ll. 2-5; encode on the fly), and subsequently to encode the streaming media data into a first streaming protocol used by a client system after the streaming media data is retrieved from the mass storage facility for delivery to the client system (col. 6, ll. 32-40; retrieve and stream to client).

Markowitz teaches the utilization of a protocol dependent caching subsystem but does not explicitly teach the utilization of a protocol independent caching subsystem wherein the independent subsystem is utilized to manage a flow of streaming media data to and from the operating system in a streaming media protocol independent manner. However, in related art, Pinckney teaches on this aspect of a protocol independent cache wherein Pinckney teaches the utilization of a cache wherein the data stored in the cache memory is not dependent on a certain protocol and is therefore considered protocol independent content (p. 3, para. 0033 and p. 7, para. 0069). One of ordinary skill in the art at the time of the applicant's invention would have found it obvious in view of Pinckney to utilize a protocol independent caching subsystem in

combination with the protocol dependent cache taught by Markowitz. One of ordinary skill in the art would have been motivated to utilize a protocol independent cache as taught by Pinckney to separate the content being sought by a user from the protocol needed in order to fetch the content (Pinckney, p. 7, para. 0069). The combination of Markowitz and Pinckney teaches further the delivery of streaming media data to the client system according to the first streaming media protocol and to control a pace of delivery of the streaming media data to the client (Markowitz, col. 6, ll. 4-17; stream from media storage to client based on different bandwidth capabilities).

20. Regarding claim 91, Markowitz and Pinckney teach a method wherein the protocol independent caching subsystem comprises:

a disk subsystem to control storage of streaming media data in the mass storage facility and retrieval of streaming media data from the mass storage facility (Markowitz col. 6, ll. 41-46; use of media storage devices); and

a pacer subsystem to control delivery of streaming media data to the client system (Markowitz, col. 6, ll. 4-16; control of stream).

21. Regarding claim 92, Markowitz and Pinckney teach a method wherein the streaming media data are read from the mass storage facility asynchronously with respect to outputting the streaming media data to the client system (Pinckney, p. 3, para. 0033).

22. Regarding claim 93, Markowitz and Pinckney teach a method wherein the streaming media data are read from the mass storage facility at a pace independent of

a requested pace for streaming the streaming media data (Markowitz, col. 6, ll. 4-16; control of stream).

23. Regarding claim 94, Markowitz and Pinckney teach a method wherein the streaming media data are read from the mass storage facility as one or more data objects that include payload packets comprising media data formatted in accordance with a streaming media format supported by the client system (Pinckney, p. 3, para. 0033).

24. Regarding claim 95, Markowitz and Pinckney teach a method wherein the streaming media data is stored in the mass storage facility as a plurality of discrete data objects, each of said data objects containing a separate portion of a media stream in the form of a plurality of media packets formatted for a particular streaming media protocol (Pinckney, p. 3, para. 0033).

25. Regarding claim 96, Markowitz and Pinckney teach a method wherein each of said plurality of discrete data objects is a file (Pinckney, p. 3, para. 0033).

Response to Arguments

26. Applicant's arguments, see Remarks, filed 21 November 2007, with respect to the rejection(s) of claim(s) 37 and 39-78 under Pinckney, III et al. (US 2002/0169926 A1) in view of Jones et al. (US 6,744,763) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Markowitz et al. (US 6,651,103) and Pinckney, III et al. (US 2002/0169926 A1).

Conclusion

27. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Son et al. (US 2002/0047899) teaches a method and apparatus for preprocessing and postprocessing content in an interactive information distribution system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin A. Ailes whose telephone number is (571)272-3899. The examiner can normally be reached on Monday-Thursday 6AM-10PM in accordance with IFP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571)272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

baa

ANDREW CALDWELL
SUPERVISORY PATENT EXAMINER